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Ton, et al.

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| Form 1449 (Modified)                             | Atty. Docket No.<br>COWA0002 | Serial No.:<br>Unassigned |
| Information Disclosure<br>Statement By Applicant | Applicant:<br>Ton, et al.    | Group:<br>Unassigned      |
| (Use Several Sheets if Necessary)                | Filing Date:<br>Herewith     |                           |

## U.S. Patent Documents

| Examiner Initial | No. | Patent No. | Issue Date | Patentee            | Class | Sub-class | Filing Date |
|------------------|-----|------------|------------|---------------------|-------|-----------|-------------|
| /L.N./           | A   | 6,480,522  | 11/12/02   | Hoole et al.        | 375   | 130       | 11/28/00    |
|                  | B   | 6,469,991  | 10/22/02   | Chuah               | 370   | 329       | 5/22/98     |
|                  | C   | 6,381,250  | 4/30/02    | Jacobson et al.     | 370   | 468       | 1/22/99     |
|                  | D   | 6,377,548  | 4/23/02    | Chuah               | 370   | 233       | 5/22/98     |
|                  | E   | 6,359,923  | 3/19/02    | Agee et al.         | 375   | 130       | 12/18/97    |
|                  | F   | 6,351,468  | 2/26/02    | LaRowe, Jr., et al  | 370   | 449       | 7/2/98      |
|                  | G   | 6,327,254  | 12/4/01    | Chuah               | 370   | 328       | 5/22/98     |
|                  | H   | 6,115,390  | 9/5/00     | Chuah               | 370   | 443       | 5/22/98     |
|                  | I   | 6,226,277  | 5/1/01     | Chuah               | 370   | 328       | 5/22/98     |
|                  | J   | 6,272,140  | 8/7/01     | LaRowe, Jr., et al  | 370   | 403       | 7/2/98      |
|                  | K   | 6,314,091  | 11/6/01    | LaRowe, Jr., et al  | 370   | 338       | 7/2/98      |
|                  | L   | 5,684,791  | 11/4/97    | Raychaudhuri, et al | 370   | 278       | 11/7/95     |
|                  | M   | 5,638,371  | 6/10/97    | Raychaudhuri, et al | 370   | 347       | 6/27/95     |
|                  | N   | 5,592,470  | 1/7/97     | Raychaudhuri, et al | 370   | 320       | 12/21/94    |
|                  | O   | 6,038,216  | 3/14/00    | Packer              | 370   | 231       | 11/1/96     |
|                  | P   | 6,298,041  | 10/2/01    | Packer              | 370   | 231       | 4/27/99     |
|                  | Q   | 6,295,285  | 9/25/01    | Whitehead           | 370   | 329       | 4/17/97     |
|                  | R   | 6,198,728  | 3/6/01     | Hulyalkar et al.    | 370   | 252       | 12/19/96    |
|                  | S   | 6,147,975  | 11/14/00   | Bowman-Amuah        | 370   | 252       | 6/2/99      |
|                  | T   | 5,970,062  | 10/19/99   | Bauchot             | 370   | 345       | 2/18/97     |
|                  | U   | 5,875,186  | 2/23/99    | Belanger et al.     | 370   | 331       | 1/23/97     |
|                  |     |            |            |                     |       |           |             |
|                  |     |            |            |                     |       |           |             |

## Foreign Patent or Published Foreign Patent Application

| Examiner Initial | No. | Document No. | Publication Date | Country or Patent Office | Class | Sub-class | Translation |    |
|------------------|-----|--------------|------------------|--------------------------|-------|-----------|-------------|----|
|                  |     |              |                  |                          |       |           | Yes         | No |
| /L.N./           | V   | 917 317      | 5/19/99          | EPO                      | H04L  | 12/28     | X           |    |
|                  | W   | 917 316      | 5/19/99          | EPO                      | H04L  | 12/28     | X           |    |
|                  | X   | 912 016      | 4/28/99          | EPO                      | H04L  | 12/28     | X           |    |
|                  | Y   | 913 968      | 5/6/99           | EPO                      | H04L  | 12/28     | X           |    |
|                  | Z   | 915 592      | 5/12/99          | EPO                      | H04L  | 12/28     | X           |    |
|                  | AA  | 912 015      | 4/28/99          | EPO                      | H04L  | 12/26     | X           |    |
|                  | BB  | 719 062      | 6/26/96          | EPO                      | H04Q  | 7/36      | X           |    |
|                  | CC  | 755 164      | 1/22/97          | EPO                      | H04Q  | 11/04     | X           |    |
|                  | DD  | 804 006      | 10/29/97         | EPO                      | H04L  | 12/28     | X           |    |

## Other Documents

| Examiner Initial | No.  | Author, Title, Date, Place (e.g. Journal) of Publication   |
|------------------|------|--|
| /L.N./           | EE   | Hossain, E. et al.; <u>A Centralized TDMA-Based Scheme for Fair Bandwidth Allocation in Wireless IP Networks</u> ; IEEE Journal on Selected Areas in Communications vol.19, no.11 p. 2201-14; Nov. 2001.   |
|                  | FF   | Hossain, E. et al.; <u>Link-State Aware Dynamic Traffic Scheduling for Providing Predictive QoS in Wireless Mobile Multimedia Networks</u> ; Journal of Interconnection Networks vol.1, no.3 p. 221-45; World Scientific, Sept. 2000.  |
|                  | GG   | Shimizu, Y. et al.; <u>Proposal of Flow and Resource Control Schemes for ABR Service in Wireless ATM</u> ; 10th International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC'99). Proceedings Part vol.3 p. 1237-41 vol.3; Osaka Univ, Osaka, Japan; 1999.   |
|                  | HH   | Wang, L. et al.; <u>A Hybrid Adaptive Wireless Channel Access Protocol for Multimedia Personal Communication Systems</u> ; Wireless Personal Communications vol.13, no.1-2 p. 79-96; Kluwer Academic Publishers; May 2000.   |
|                  | II   | Zhang, Z. et al.; <u>A Bandwidth Reservation Multiple Access Protocol for Wireless ATM Local Networks</u> ; International Journal of Wireless Information Networks vol.4, no.3 p. 147-61; Plenum; July 1997.   |
|                  | JJ   | Xu, G. et al.; <u>Throughput Multiplication of Wireless LANs for Multimedia Services: SDMA Protocol Design</u> ; 1994 IEEE GLOBECOM. Communications: The Global Bridge. Conference Record (Cat. No.94CH34025) Part vol.3 p. 1326-32 vol.3; IEEE, New York, NY, USA; 1994.  |
|                  | ✓ KK | Andrews, M. et al.; <u>Dynamic Bandwidth Allocation Algorithms for High-Speed Data Wireless Networks</u> ; Lucent Technologies; (note: the pages appear in reverse order with page 25 being page 1 of the document and page 1 of the document being page 25).  |
|                  | LL   | Chiang, C. et al.; <u>Shared Tree Wireless Network Multicast</u> ; University of California, Los Angeles; April 1997.  |
|                  | MM   | Goyal, P. et al.; <u>Start-time Fair Queuing: A Scheduling Algorithm for Integrated Services Packet Switching Networks</u> ; University Of Texas, Austin.  |
|                  | NN   | Tassiulas, L. et al.; <u>Maxmin Fair Scheduling in Wireless Networks: August 2001</u> .  |
|                  | OO   | Jayaram, R. et al.; <u>A Call Admission and Control Scheme for Quality-of-Service (QoS) Provisioning in Next Generation Wireless Networks</u> ; Baltzer Journals.  |
|                  | PP   | Lin, Chunhung; <u>On-Demand QoS Routing in Multihop Mobile Networks</u> ; National Sun Yat-Sen University, Taiwan.   |
|                  | QQ   | Ng, T. et al.; <u>Packet Fair Queuing Algorithms for Wireless Networks with Location-Dependent Errors</u> ; Carnegie Mellon University, February 2000;   |
|                  | RR   | Royer, E. et al.; <u>A Review of Current Routing Protocols for Ad Hoc Mobile Wireless Networks</u> ; IEEE Personal Communications; 1999;   |
|                  | SS   | Su, William; <u>Bandwidth Allocation Strategies for Wireless ATM Networks Using Predictive Reservation</u> ; University of California, Los Angeles;  |
|                  | TT   | Jiang, Z. et al.; <u>Fair and Efficient Resource Management Scheme to Support Transient Data Recovery for Migrating Users in Wireless Multicast Networks</u> ; 2002 IEEE Wireless Communications and Networking Conference Record. WCNC 2002 (Cat. No.02TH8609) Part vol.2 p. 687-91 vol.2; IEEE, Piscataway, NJ, USA; 2002. |
|                  | UU   | Campbell, A. et al.; <u>Design, Implementation, and Evaluation of Cellular IP</u> ; IEEE Personal Communications; August 2000.   |
|                  | VV   | Li, C. et al.; <u>Collision Based Multiple Access Scheme for Wireless Networks</u> ; IEEE; 2002.   |
|                  | WW   | Miklos, G. et al.; <u>Fair Bandwidth Allocation of a Wireless Base Station</u> ; March 31, 1999.   |
| ↓                | XX   | Macker, Joseph P.; <u>Controlled Link Sharing and Quality of Service Data Trans for Military Internetworking</u> ; IEEE; 1996.   |

|        |    |  |
|--------|----|--|
| /L.N./ | YY | Stamoulis, A. et al.; <u>Packet Fair Queuing Scheduling Based on Multirate Multipath-Transparent CDMA for Wireless Networks</u> ; University of Minnesota.   |
|        | ZZ | <u>Proceedings IEEE INFOCOM 2002 Conference on Computer Communications. Twenty-First Annual Joint Conference of the IEEE Computer and Communications Societies (Cat. No.37364)</u> ; IEEE, Piscataway, NJ, USA; 2002.  |
|        | 1  | Liu, J. et al.; <u>Intra- and Inter-Session Channel Provisioning for Video Distribution in Wireless Networks with Heterogeneous Users</u> ; SPIE-Int. Soc. Opt. Eng, 2002;   |
|        | 2  | Parthasarathy, R et al.; <u>A Framework for Policy-Based Quality of Service (QoS) in an LMDS Wireless Network</u> ; ACTA Press, Anaheim, CA, USA; 2002.  |
|        | 3  | Jin, R. et al.; <u>VBR Dynamic Access Control for Wireless ATM</u> ; IEICE Transactions on Communications vol.E85-B, no.7 p. 1247-56; July 2002.   |
|        | 4  | Liao, W. et al.; <u>A TDMA-Based Bandwidth Reservation Protocol for QoS Routing in a Wireless Mobile ad hoc Network</u> ; 2002 IEEE International Conference on Communications. Conference Proceedings. ICC 2002 (Cat. No.02CH37333) Part vol.5 p. 3186-90 vol.5; IEEE, Piscataway, NJ, USA; 2002.   |
|        | 5  | Heikkinen, T.; <u>Distributed Scheduling Via Pricing in a Communication Network</u> ; NETWORKING 2002. Networking Technologies, Services, and Protocols; Performance of Computer and Communication Networks; Mobile and Wireless Communications. Second International IFIP-TC6 Networking Conference. Proceedings (Lecture Notes in Computer Science Vol.2345) p. 850-62; Springer-Verlag , Berlin, Germany; 2002. |
|        | 6  | Ganguly, S. et al.; <u>An Implicit QoS Provisioning Strategy in Multimedia Cellular Network</u> ; 2002 IEEE Wireless Communications and Networking Conference Record. WCNC 2002 (Cat. No.02TH8609) Part vol.1 p. 301-6 vol.1; IEEE, Piscataway, NJ, USA; 2002.   |
|        | 7  | Chiang, M. et al.; <u>Resource Allocation for QoS Provisioning in Wireless ad hoc Networks</u> ; GLOBECOM'01. IEEE Global Telecommunications Conference (Cat. No.01CH37270) Part vol.5 p. 2911-15 vol.5; IEEE, Piscataway, NJ, USA; 2001.  |
|        | 8  | Ogawa, M. et al.; <u>Dynamic Queuing and Bandwidth Allocation for Controlling Delay Time for QoS in CDMA Packet System</u> ; 12th IEEE International Symposium on Personal, Indoor and Mobile Radio Communications. PIMRC 2001. Proceedings (Cat. No.01TH8598) Part vol.2 p. G-38-42 vol.2; IEEE, Piscataway, NJ, USA; 2001.   |
|        | 9  | Koh, H. et al.; <u>QoS Negotiation Algorithm for Effective Radio Resource Allocation</u> ; Proceedings of the IASTED International Conference. Internet and Multimedia Systems and Applications p. 214-19; IASTED , Anaheim, CA, USA; 2000.  |
|        | 10 | Wang, J. et al.; <u>Adaptive Mobile Multimedia QoS Control and Resource Management</u> ; Proceedings Ninth IEEE International Conference on Networks p. 332-7; IEEE Comput. Soc , Los Alamitos, CA, USA; 2001.   |
|        | 11 | Kang, S. et al.; <u>Provisioning Service Differentiation in ad hoc Networks by Modification of the Backoff Algorithm</u> ; Proceedings Tenth International Conference on Computer Communications and Networks (Cat. No.01EX495) p. 577-80; IEEE, Piscataway, NJ, USA; 2001.  |
|        | 12 | Guo, Y. et al.; <u>Class-Based Quality of Service Over Air Interfaces in 4G Mobile Networks</u> ; IEEE Communications Magazine vol.40, no.3 p. 132-7; March 2002.  |
|        | 13 | Kwok, Y. et al.; <u>A Quantitative Comparison of Multiple Access Control Protocols for Wireless ATM</u> ; IEEE Transactions on Vehicular Technology vol.50, no.3 p. 796-815; May 2001.   |
| ↓      | 14 | Ma, Y. et al.; <u>A Dynamic Scheduling Algorithm and Admission Strategy for Multimedia Traffic in Broadband Wireless Network. (Part II: Performance and tight bound)</u> ; 2000 IEEE Wireless Communications and Networking Conference. Conference Record (Cat. No.00TH8540) Part vol.3 p. 1384-9 vol.3; IEEE, Piscataway, NJ, USA; 2000;  |

|        |    |   |
|--------|----|---|
| /L.N./ | 15 | Ma, Y. et al.; <u>A Dynamic Scheduling Algorithm and Admission Strategy for Multimedia Traffic in Broadband Wireless Network. (Part I: Algorithm and admission policy)</u> ; 2000 IEEE Wireless Communications and Networking Conference. Conference Record (Cat. No.00TH8540) Part vol.3 p. 1378-83 vol.3; IEEE, Piscataway, NJ, USA; 2000;  |
|        | 16 | Ueno, Y. et al.; <u>A Distributed-Control Multimedia Multiple Access Protocol for Wireless adhoc Networks</u> ; Transactions of the Institute of Electronics, Information and Communication Engineers B vol.J84-B, no.4 p. 707-16; Inst. Electron. Inf. & Commun. Eng., April 2001;   |
|        | 17 | Kwok, Y. et al.; <u>A Performance Study of Multiple Access Control Protocols for Wireless Multimedia Services</u> ; Proceedings 2000 International Conference on Network Protocols p. 283-92; IEEE Comput. Soc., Los Alamitos, CA, USA; 2000;   |
|        | 18 | Poon, T. et al.; <u>Traffic Management in Wireless ATM Network Using a Hierarchical Neural-Network-Based Prediction Algorithm</u> ; Proceedings of the ISCA 15th International Conference Computers and Their Applications p. 393-5; Int. Soc. Comput. & Their Appl.- ISCA, Cary, NC, USA; 2000;  |
|        | 19 | Deng, J. et al.; <u>A Nonpreemptive Priority-Based Access Control Scheme for Broadband ad hoc Wireless ATM Local Area Networks</u> ; IEEE Journal on Selected Areas in Communications vol.18, no.9 p. 1731-9; Sept. 2000;   |
|        | 20 | Shimizu, Y. et al.; <u>Proposal and Performance of Flow and Radio Resource Control Schemes for ABR Service in Wireless ATM</u> ; IEICE Transactions on Communications vol.E83-B, no.8 p. 1705-12; Inst. Electron. Inf. & Commun. Eng.; Aug. 2000;   |
|        | 21 | Davoli, F. et al.; <u>A Two-Level Stochastic Approximation for Admission Control and Bandwidth Allocation</u> ; IEEE Journal on Selected Areas in Communications vol.18, no.2 p. 222-33; Feb. 2000;   |
|        | 22 | Sherif, M.R. et al.; <u>A Generic Bandwidth Allocation Scheme for Multimedia Substreams in Adaptive Networks Using Genetic Algorithms</u> ; WCNC. 1999 IEEE Wireless Communications and Networking Conference (Cat. No.99TH8466) Part vol.3 p. 1243-7 vol.3; IEEE, Piscataway, NJ, USA; 1999;   |
|        | 23 | Lee, S. et al.; <u>Wireless ATM MAC Layer Protocol for Near Optimal Quality of Service Support</u> ; IEEE GLOBECOM 1998 (Cat. NO. 98CH36250) Part vol.4 p. 2264-9 vol.4; IEEE, Piscataway, NJ, USA; 1998;   |
|        | 24 | Pajares, A.; et al.; <u>Dynamic Frequency and Resource Allocation with Adaptive Error Control Based on RTP for Multimedia QoS Guarantees in Wireless Networks</u> ; Proceedings IEEE International Conference on Multimedia Computing and Systems Part vol.2 p. 333-7 vol.2; IEEE Comput. Soc., Los Alamitos, CA, USA; 1999;  |
|        | 25 | Hannikainen, M. et al.; <u>TUTMAC: A Medium Access Control Protocol for a New Multimedia Wireless Local Area Network</u> ; Ninth IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (Cat. No.98TH8361) Part vol.2 p. 592-6 vol.2; IEEE, New York, NY, USA; 1998;  |
|        | 26 | Moon, B. et al.; <u>A Study of Bandwidth Allocation Strategies in Multimedia Wireless Networks</u> ; Proceedings APCC'97. Third Asia-Pacific Conference on Communications. Incorporating. ACOFT (Australian Conference on Optical Fibre Technology). ATNAC (Australian Telecommunication Networks and Applications Conference) Part vol.1 p. 509-13 vol.1; IREE Soc., Milsons Point, NSW, Australia; 1997       |
| ↓      | 27 | Movahhedinia, N. et al.; <u>Non-Uniform Polling and Reservation Alternatives for Bandwidth Management in Broadband Wireless Networks</u> ; Gateway to the Twenty First Century. International Conference on Universal Personal Communications. 1996 5th IEEE International Conference on Universal Personal Communications Record (Cat. No.96TH8185) Part vol.2 p. 666-70 vol.2; IEEE, New York, NY, USA; 1996; |

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